

⁴⁶
~~48~~ ~~47.~~ A method according to claim ~~45~~ wherein one amino acid residue in the sub-sequence is mutated.

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~~49~~ ~~48.~~ A method according to claim ~~45~~ wherein the sub-sequence is capable of being digested by a serine protease.

⁴⁹
~~50~~ ~~49.~~ A method according to claim ~~48~~ wherein the sub-sequence has an amino acid sequence including the sequence: RAAAG.

⁵⁰
~~51~~ ~~50.~~ A method according to claim ~~49~~ wherein the sub-sequence is mutated by replacing arginine in the sequence: RAAAG with alanine.

⁴⁹
~~52~~ ~~51.~~ A method according to claim ~~48~~ wherein the sub-sequence has an amino acid sequence selected from the group of sequences shown in SEQ ID NOS: 17 to 44.

⁵²
~~53~~ ~~52.~~ A method according to claim ~~51~~ wherein the sub-sequence is mutated by replacing arginine in the sequence selected from the group of sequences shown in SEQ ID NOS: 17 to 44 with alanine.

⁴⁹
~~54~~ ~~53.~~ A method according to claim ~~48~~ wherein the sub-sequence is capable of being digested by thrombin and has an amino acid sequence shown in SEQ ID NOS: 8 or 9.

⁴⁹
~~55~~ ~~54.~~ A method according to claim ~~48~~ wherein the sub-sequence is capable of being digested by plasmin and has an amino acid sequence shown in SEQ ID NOS: 11 or 12.

⁴⁹
~~56~~ ~~55.~~ A method according to claim ~~48~~ wherein the sub-sequence is capable of being digested by kallikrein.

⁵⁶
~~57~~ ~~56~~. A method according to claim ~~55~~ wherein the sub-sequence has an amino acid sequence shown in SEQ ID NOS: 9 or 10.

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~~58~~ ~~57~~. A method according to claim ~~45~~ wherein the sub-sequence is capable of being digested by a metalloproteinase.

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~~59~~ ~~58~~. A method according to claim ~~57~~ wherein the sub-sequence has an amino acid sequence including the sequence: ALAAA.

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~~60~~ ~~59~~. A method according to claim ~~58~~ wherein the sub-sequence is mutated by replacing alanine at any position in the sequence: ALAAA with another amino acid residue.

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~~61~~ ~~60~~. A method according to claim ~~59~~ wherein the sub-sequence is mutated by replacing the alanine which is N-terminal to leucine in the sequence: ALAAA with another amino acid.

⁵⁸
~~62~~ ~~61~~. A method according to claim ~~57~~ wherein the sub-sequence has an amino acid sequence selected from the group of sequences shown in SEQ ID NOS: 45 to 70.

⁶²
~~63~~ ~~62~~. A method according to claim ~~61~~ wherein the sub-sequence is mutated by replacing alanine at any position in the sequence selected from the group of sequences shown in SEQ ID NOS: 45 to 70 with another amino acid residue.

⁶³
~~64~~ ~~63~~. A method according to claim ~~62~~ wherein the alanine that is replaced is N-terminal to leucine.

⁵⁸
~~65~~ ~~64~~. A method according to claim ~~57~~ wherein the sub-sequence is capable of being digested by gelatinase A or B.

⁶⁵
~~66~~ ~~65~~. A method according to claim ~~64~~ wherein the sub-sequence has an amino acid sequence shown in SEQ ID NO: 13.

~~67~~ ~~66~~. A method according to any one of claims ⁴⁶~~45~~ to ⁶⁶~~65~~ wherein the tropoelastin is human tropoelastin.

⁶⁸
~~68~~ ~~67~~. A method for enhancing the susceptibility of a tropoelastin to proteolysis comprising inserting a sub-sequence into the tropoelastin so that the susceptibility of the tropoelastin to proteolysis is enhanced.

⁶⁸
~~69~~ ~~68~~. A method according to claim ~~67~~ wherein one sub-sequence is inserted.

⁶⁸
~~70~~ ~~69~~. A method according to claim ~~67~~ wherein the inserted sub-sequence is capable of being digested with a serine protease.

⁷⁰
~~71~~ ~~70~~. A method according to claim ~~69~~ wherein the inserted sub-sequence has an amino acid sequence including the sequence: RAAAG.

⁷⁰
~~72~~ ~~71~~. A method according to claim ~~69~~ wherein the inserted sub-sequence has an amino acid sequence selected from the group of sequences shown in SEQ ID NOS: 17 to 44.

⁷⁰
~~73~~ ~~72~~. A method according to claim ~~69~~ wherein the inserted sub-sequence is capable of being digested by thrombin and has an amino acid sequence shown in SEQ ID NOS: 8 or 9.

⁷⁰
~~74~~ ~~73~~. A method according to claim ~~69~~ wherein the inserted sub-sequence is capable of being digested by plasmin and has an amino acid sequence shown in SEQ ID NOS: 11 or 12.

⁷⁰
~~75~~ ~~74~~. A method according to claim ~~69~~ wherein the inserted sub-
sequence is capable of being digested by kallikrein.

⁷⁵
~~76~~ ~~75~~. A method according to claim ~~74~~ wherein the inserted sub-
sequence has an amino acid sequence shown in SEQ ID NOS: 9 or 10.

⁶⁸
~~77~~ ~~76~~. A method according to claim ~~67~~ wherein the inserted sub-
sequence is capable of being digested by a metalloproteinase.

⁷⁷
~~78~~ ~~77~~. A method according to claim ~~76~~ wherein the inserted sub-
sequence has an amino acid sequence including the sequence: ALAAA.

⁷⁷
~~79~~ ~~78~~. A method according to claim ~~76~~ wherein the inserted sub-
sequence has an amino acid sequence selected from the group of sequences shown in
SEQ ID NOS: 45 to 70.

⁷⁷
~~80~~ ~~79~~. A method according to claim ~~76~~ wherein the inserted sub-
sequence is capable of being digested by gelatinase A or B.

⁸⁰
~~81~~ ~~80~~. A method according to claim ~~79~~ wherein the inserted sub-
sequence has the amino acid sequence shown in SEQ ID NO: 13.

⁶⁸ ⁸¹
~~82~~ ~~81~~. A method according to any one of claims ~~67~~ to ~~80~~ wherein the
tropoelastin is human tropoelastin.

~~83~~ ~~82~~. A peptidomimetic molecule comprising all or part of a peptide
selected from the group consisting of KAPGVGGAF, RAAAGLG, RLSPELREGD,
KAAQFGLVPGV, KSAAKVAAKAQLRAA, RLSPELRE AND
LAAAKAAKYGAA.

⁸⁴ ~~83~~. A peptidomimetic molecule which has the sequence: H-Ala-Ala-Lys-Ala-Gln-Leu-Arg-Ala-Ala-Ala-Gly-Leu-Gly-Ala-OH or H-Ala-Ala-Lys-Ala-Gln-Leu-Arg-R-Ala-Ala-Ala-Gly-Leu-Gly-Ala-OH (where R = a reduced peptide bond).

⁸⁵ ~~84~~. A peptidomimetic molecule which is a retro-inverso pseudo peptide which has the sequence: H-D-Ala-Gly-D-Leu-Gly-D-Ala-D-Ala-D-Ala-(R)-D-Arg-D-Leu-D-Gln-D-Ala-D-Lys-D-Ala-D-Ala-OH (where R = a reduced peptide bond) or H-D-Ala-Gly-D-Leu-Gly-D-Ala-D-Ala-D-Ala-D-Arg-D-Leu-D-Gln-D-Ala-D-Lys-D-Ala-D-Ala-OH.

⁸⁶ ~~85~~. A peptidomimetic molecule which has the sequence H-Val-Pro-Gly-Ala-Leu-Ala-Ala-Ala-OH or H-Val-Pro-Gly-Ala-(R)-Leu-Ala-Ala-Ala-OH (where R = a reduced peptide bond).

⁸⁷ ~~86~~. A peptidomimetic molecule which is a retro-inverso pseudo peptide which has the sequence: H-D-Ala-D-Ala-D-Ala-D-Leu-(R)-D-Ala-Gly-D-Pro-D-Val-OH (where R = a reduced peptide bond) or H-D-Ala-D-Ala-D-Ala-D-Leu-D-Ala-Gly-D-Pro-D-Val-OH.

⁸⁸ ~~87~~. A method for enhancing the purification of a tropoelastin comprising including a peptidomimetic molecule according to any one of claims ⁸³ ~~82~~ to ⁸⁷ ~~86~~ in a crude tropoelastin preparation which is being subjected to purification.

⁸⁹ ~~88~~. A pharmaceutical composition comprising a peptidomimetic molecule according to any one of claims ⁸³ ~~82~~ to ⁸⁷ ~~86~~ and a pharmaceutically acceptable carrier.